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EXAMINER

YIGDALL, MICHAEL J

ART UNIT	PAPER NUMBER
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2192

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/878,859

Applicant(s)

LOK ET AL.

Examiner

Michael J. Yigdall

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 14, 2005 has been entered.
2. Claims 1-20 are pending. The priority date now considered is March 21, 2001. It should be noted that claim 9 is labeled "currently amended" in the claim listing, rather than --previously presented-- as would appear to be the case. See 37 CFR 1.121(c).

Response to Arguments

3. Applicant's arguments have been fully considered but they are not persuasive.

Applicant contends that Muta neither discloses nor suggests a remote-capable component which is configured to generate a message to the component on the remote client to perform the respective function on the remote client, such that the respective function is only performed on the remote client, and contends that Muta performs the drawing function on the slave server rather than on the client (Applicant's remarks, page 11, third paragraph).

However, the examiner disagrees with Applicant's characterization that the drawing function is performed on the slave server "rather than on the client." Although Muta does disclose that the drawing function is performed on the slave server (see, for example, column 11, lines 7-21), Muta also discloses that the respective drawing function is performed on the remote client (see, for example, column 11, lines 50-62). Nonetheless, because the drawing function is

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performed both on the remote client and on the slave server, Muta does not anticipate the limitation that the respective function is performed only on the remote client.

However, Mittal discloses an analogous method for distributed processing through a server and a remote client (see, for example, the abstract), wherein the functions of the user interface are performed only at the remote client (see, for example, client 133 in FIG. 3 and column 6, line 64 to column 7, line 7), as set forth in the claim rejections below.

Applicant contends that Muta neither discloses nor suggests the step of generating a message comprising a higher-level command to the user interface toolkit on the remote client to perform the function, and contends that Muta, in contrast, merely transmits low-level commands to render individual pixels on the client (Applicant's remarks, page 11, third paragraph).

However, Muta expressly discloses generating a message, in the form of a drawing command, to send to the remote client to perform the function (see, for example, column 11, lines 29-62). The drawing commands are based on an application programming interface, and are thus higher-level commands than the pixel data provided by the display driver 325 to the screen 245 (see, for example, FIG. 8 and column 11, lines 13-21).

Applicant further contends that neither Muta nor Cohen, either alone or in combination, disclose or suggest the step of substituting the portion of the code relevant to executing the function with the portion of code configured to issue the remote command to execute the function (Applicant's remarks, page 14, second paragraph).

However, as presented in the previous Office action, Muta discloses substituting the normal flow of the graphics engine and display driver with a component that issues drawing

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commands to the remote client to execute the function (see, for example, column 11, lines 7-12). The graphics engine 321 and the display driver 325 constitute “the portion of the code relevant to executing the function.” The component that issues drawing commands to the remote client to execute the function, i.e. the drawing command monitor 323 (see, for example, column 11, lines 13-21), is “the portion of code configured to issue the remote command to execute the function.” Thus, Muta alone teaches substituting the portion of the code relevant to executing the function with the portion of code configured to issue the remote command to execute the function.

Although Muta does not expressly disclose a code-generating computer program for performing this substitution step, Cohen discloses generating code automatically to distribute an application between a server and a remote client, by reading the code and substituting the components and functions with a remote-capable configuration (see, for example, column 3, lines 11-43). In other words, Cohen discloses a code-generating computer program. The code-generating computer program provides support for a plurality of computing topologies without having to redesign the distributed system for every case (see, for example, column 2, lines 62-64). One of ordinary skill in the art would have been motivated to provide such support.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Muta and Cohen such that substituting the portion of the code relevant to executing the function with the portion of code configured to issue the remote command to execute the function, as disclosed by Muta, is performed by a code-generating computer program such as taught by Cohen. Accordingly, in combination, Muta and Cohen teach the limitations recited in the claim.

Moreover, it should be noted that, notwithstanding Applicant's discussion of frame buffer systems (Applicant's remarks, pages 10-11), the plain language of the claims does not exclude Muta. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

4. Applicant's arguments with respect to Thomas have been considered but are moot in view of the new ground(s) of rejection.

Oath/Declaration

5. It is noted that Applicant has amended the specification to change the priority claim (Applicant's remarks, page 9, second paragraph). Specifically, the specification has been amended to decline the claim to U.S. Provisional Patent Application Serial No. 60/210,643, filed on June 9, 2000, entitled "Method and System to Support Rich User Interfaces on Light Clients" (Applicant's amendments to the specification, page 2). The priority date now considered is March 21, 2001. However, the combined declaration and power of attorney filed on September 17, 2001 does not reflect this change to the priority claim. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

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harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/296,193. Although the conflicting claims are not identical, they are not patentably distinct from each other because both recite a method for distributed processing through a server and a remote client and a corresponding distributed computer system having at least one server and one remote client.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-8 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,286,003 to Muta (art of record, "Muta") in view of U.S. Pat. No. 6,233,609 to Mittal (art made of record, "Mittal").

With respect to claim 1 (currently amended), Muta discloses a method for distributed processing through a server and a remote client wherein an application is executed entirely in the server (see, for example, FIGS. 2 and 8, and column 1, lines 56-60), wherein the application is configured to interact with a user interface toolkit according to an application programming interface (see, for example, column 11, lines 13-21), and wherein the user interface toolkit has a component that performs a function (see, for example, column 2, lines 45-54), the method comprising:

(a) providing the user interface toolkit on the remote client such that the component is configured to perform the function on the remote client, wherein said component is related to user interaction; and to generate an event coupled to said component in response to user interaction with said component (see, for example, master applet 215 in FIG. 8 and column 2, lines 36-44, which shows a user interface toolkit on the remote client having an event monitor,

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i.e. a component related to user interaction, and an event sender, i.e. for generating events coupled to the monitor in response to user interaction);

(b) providing a remote-capable user interface toolkit on the server comprising a remote-capable component which is configured to interact with the application according to the application programming interface and which is configured to generate a message to the component on the remote client to perform the respective function on the remote client (see, for example, slave daemon 247 in FIG. 8 and column 10, lines 56-67, which shows a remote-capable user interface toolkit on the server having an event analyzer component for interacting with an application by way of hooks and window messages, i.e. by way of an application programming interface);

(c) invoking the remote-capable user interface toolkit by the application to perform a function according to the application programming interface (see, for example, column 10, lines 56-67 and column 11, lines 13-21, which shows the application invoking the remote-capable user interface toolkit by calling the drawing functions of the application programming interface);

(d) generating the message by the remote-capable component of the remote-capable user interface toolkit on the server in response to the invocation by the application, the message comprising a higher-level command to the user interface toolkit on the remote client to perform the function (see, for example, column 11, lines 29-62, which shows generating messages, in the form of drawing commands, to send to the user interface toolkit on the remote client to perform the respective function, and see, for example, FIG. 8 and column 11, lines 13-21, which shows that the drawing commands to the remote client are based on an application programming

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interface and are thus higher-level commands than the pixel data provided by the display driver 325 to the screen 245);

(e) communicating the message between the remote-capable user interface toolkit on the server and the user interface toolkit on the remote client (see, for example, column 11, lines 29-49, which shows sending or communicating the drawing command message between the server and the remote client); and

(f) performing the function on the remote client by the component of the user interface toolkit in response to the message (see, for example, column 11, lines 50-62, which shows the user interface toolkit performing the function on the remote client in response to the message).

Although Muta discloses that the respective function is performed at the remote client (see, for example, column 11, lines 50-62), Muta also discloses that the function is performed at the server (see, for example, column 11, lines 7-21), and therefore does not expressly disclose the limitation wherein the respective function is only performed at the remote client.

However, Mittal discloses an analogous method for distributed processing through a server and a remote client (see, for example, the abstract), wherein the functions of the user interface are performed only at the remote client (see, for example, client 133 in FIG. 3 and column 6, line 64 to column 7, line 7), so that a plurality of clients can interact with an application independently (see, for example, column 6, lines 32-38).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Muta such that the respective function is only performed at the remote client, as taught by Mittal, so that a plurality of clients can interact with the application independently.

With respect to claim 2 (original), Muta further discloses the limitation wherein the component in the user interface toolkit is configured to render a graphical item and the remote-capable component is configured to generate a message to render the graphical item (see, for example, drawing command analyzer 337 in FIG. 8, which shows the component in the user interface toolkit for rendering a graphical item, and drawing command sender 329 in FIG. 8, which shows the remote-capable component for generating the message), and wherein communicating the message between the remote-capable user interface toolkit on the server and the user interface toolkit on the remote client comprises transmitting the message to the user interface toolkit on the remote client to render the graphical item (see, for example, column 11, lines 29-49, which shows sending or transmitting the message to render the graphical item).

With respect to claim 3 (original), Muta further discloses the limitation wherein performing the function on the remote client by the component of the user interface toolkit comprises rendering the graphical item on the remote client in response to the message (see, for example, column 11, lines 50-62, which shows rendering the graphical item on the remote client in response to the drawing command message).

With respect to claim 4 (original), Muta further discloses the limitation wherein the component in the user interface toolkit is configured to install an event handler and the remote-capable component is configured to generate a message to install the event handler (see, for example, column 9, lines 26-35, which shows activating or installing an event monitor in response to a notice or message from the server, and lines 36-52, which further shows using an event handler), and wherein communicating the message between the remote-capable user

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interface toolkit on the server and the user interface toolkit on the remote client comprises transmitting the message to the user interface toolkit on the remote client to install an event handler (see, for example, column 9, lines 6-17, which shows transmitting the message from the remote-capable user interface toolkit on the server to the user interface toolkit on the remote client).

With respect to claim 5 (original), Muta further discloses the limitation wherein performing the function on the remote client by the component of the user interface toolkit comprises installing the event handler on the remote client in response to the message (see, for example, column 9, lines 26-35, which shows activating or installing an event monitor on the remote client in response to the message).

With respect to claim 6 (original), Muta further discloses:

(a) generating an event by the remote-capable component of the remote-capable user interface toolkit in response to the step of invoking (see, for example, column 10, lines 56-67 and column 11, lines 13-21, which shows invoking the remote-capable user interface toolkit, and lines 29-62, which further shows generating drawing commands or events to send to the user interface toolkit on the remote client); and

(b) wherein communicating the message between the remote-capable user interface toolkit on the server and the user interface toolkit on the remote client comprises asynchronously transmitting the event to the user interface toolkit (see, for example, FIG. 8, which shows asynchronous communications between the remote-capable user interface toolkit on the server and the user interface toolkit on the client with drawing command buffer 327).

With respect to claim 7 (original), although Muta discloses remotely controlling graphical applications on the server (see, for example, column 2, line 55 to column 3, line 4), which encompasses database searching applications, Muta does not expressly disclose the limitation wherein the application is a database searching application configured to search a database for information in response to a user-defined request,

(a) wherein the step of generating an event by the remote-capable component of the remote-capable user interface toolkit comprises identifying information from the database in response to the user-defined request; and

(b) wherein the step of asynchronously transmitting the event to the user interface toolkit comprises asynchronously transmitting a message to the remote client to render the information from the database identified in the step of generating an event.

However, as presented above, Mittal discloses an analogous method for distributed processing through a server and a remote client (see, for example, the abstract). Mittal discloses a database searching application for searching and identifying information from a database in response to a user-defined request and relaying that information to the client (see, for example, GUI 145, applet 141 and database 143 in FIG. 3, and column 7, lines 48-54). Mittal further discloses transmitting a message to the client to render that information (see, for example, column 7, lines 14-24). The method enables the client to interact with the application and database with minimal downloading (see, for example, column 7, lines 25-31), by not having to download the application and database (see, for example, column 5, lines 3-7), so as to save time and memory resources (see, for example, column 2, lines 34-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Muta such that the application is a database searching application configured to search a database for information in response to a user-defined request, wherein the step of generating an event by the remote-capable component of the remote-capable user interface toolkit comprises identifying information from the database in response to the user-defined request, and wherein the step of asynchronously transmitting the event to the user interface toolkit comprises asynchronously transmitting a message to the remote client to render the information from the database identified in the step of generating an event, as taught by Mittal. One of ordinary skill in the art would have been motivated to enable the client to interact with the application and the database with minimal downloading, by not having to download the application and database, so as to save time and memory resources.

With respect to claim 8 (original), Mittal further discloses the limitation wherein the application is a web browser (see, for example, column 7, lines 8-13, which shows a web browser) and wherein the database is the World Wide Web (see, for example, database 143 and WAN 135 in FIG. 3, and column 5, lines 28-29, which shows that WAN 135 may be the Internet, and column 6, lines 39-41, which further shows that the knowledge base and thus the database are web-based, i.e. the World Wide Web),

(a) wherein the step of identifying information from the database comprises identifying information from the World Wide Web (see, for example, database 143 and WAN 135 in FIG. 3, and column 5, lines 28-29, which shows that WAN 135 may be the Internet, and column 6, lines 39-41, which further shows that the knowledge base and thus the database are web-based, i.e. the World Wide Web); and

(a) wherein the step of asynchronously transmitting a command to the remote client to render the information from the database comprises asynchronously transmitting a command to the remote client to render the information from the World Wide Web (see, for example, database 143 and WAN 135 in FIG. 3, and column 5, lines 28-29, which shows that WAN 135 may be the Internet, and column 6, lines 39-41, which further shows that the knowledge base and thus the database are web-based, i.e. the World Wide Web).

With respect to claim 10 (currently amended), the limitations recited in the claim are analogous to those of claim 1 (see the rejection of claim 1 above). Muta further discloses a distributed computer system having a server (see, for example, slave server 240 in FIGS. 2 and 4) and a remote client (see, for example, master controller 210 in FIGS. 2 and 4).

With respect to claims 11, 12, 14 and 15 (original), the limitations recited in the claims are analogous to those of claim 2 (see the rejection of claim 2 above).

With respect to claims 13 and 16 (original), the limitations recited in the claims are analogous to those of claim 3 (see the rejection of claim 3 above).

With respect to claims 17 and 18 (original), the limitations recited in the claims are analogous to those of claim 4 (see the rejection of claim 4 above).

With respect to claim 19 (original), the limitations recited in the claim are analogous to those of claim 5 (see the rejection of claim 5 above).

With respect to claim 20 (original), the limitations recited in the claim are analogous to those of claim 6 (see the rejection of claim 6 above).

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muta in view of Mittal, as applied to claim 1 above, and further in view of U.S. Pat. No. 6,011,918 to Cohen et al. (art of record, "Cohen").

With respect to claim 9 (previously presented), although Muta discloses substituting the normal flow of the graphics engine and display driver, i.e. the portion of code relevant to executing the function, with a component that issues drawing commands to the remote client to execute the respective function (see, for example, column 11, lines 7-12), Muta does not expressly disclose the limitation wherein the step of providing a remote-capable user interface toolkit on the server further comprises:

(a) providing a code-generating computer program configured to read in the code of the component of the user interface toolkit and to generate the remote-capable component of the remote-capable user interface toolkit by substituting at least one portion of the code relevant to executing the function with at least one portion of code configured to issue a remote command to execute the function;

(b) reading in the code of the component of the user interface toolkit;

(c) generating the remote-capable component of the remote-capable user interface toolkit by copying the code of the component and by substituting said at least one portion of the code relevant to executing the function with said at least one portion of code configured to issue the remote command to execute the function.

However, Cohen discloses generating code automatically to distribute an application between a server and a remote client, by reading the code and substituting the components and functions with a remote-capable configuration (see, for example, column 3, lines 11-43), so as to support a plurality of computing topologies without having to redesign the distributed system for every case (see, for example, column 2, lines 62-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement the distributed server and remote client system of Muta with the code generating features taught by Cohen, such that substituting the normal flow of the graphics engine and display driver, i.e. the portion of code relevant to executing the function, with a component that issues drawing commands to the remote client to execute the respective function, as disclosed by Muta (see, for example, column 11, lines 7-12), is performed by a code-generating computer program such as taught by Cohen. One of ordinary skill in the art would have been motivated to provide support for a plurality of computing topologies without having to redesign the distributed system for every case.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Pat. No. 5,909,545 to Frese, II et al. teaches a method and system for on-demand downloading of a module to enable remote control of an application program over a network.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Yigdall whose telephone number is (571) 272-3707.

The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MY

Michael J. Yigdall
Examiner
Art Unit 2192

mjy


TUAN DAM
SUPERVISORY PATENT EXAMINER